

5 What is Claimed is:

1. An optical switch comprising:

a substrate;

an optical fiber input part in a predetermined region of the substrate;

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10 an optical fiber output part in a predetermined region of the substrate at a distance from the optical fiber input part to face each other;

a first micro-mirror part between the optical fiber input part and the optical fiber output part, for reflecting a light from the optical fiber input part; and,

15 a second micro-mirror part between the optical fiber input part and the optical fiber output part, at a distance from the first micro-mirror part to face each other for reflecting the light from the first micro-mirror part to the optical fiber output part.

2. An optical switch as claimed in claim 1, wherein the substrate has grooves of predetermined depths in the regions of the optical fiber input/output parts, and the first, and second micro-mirror parts for fixing the optical fiber input/output parts, and the first, and
20 second micro-mirror parts thereto.

3. An optical switch as claimed in claim 2, wherein the groove has upper sloped sides, and lower vertical sides, to form a 'Y'.

25 4. An optical switch as claimed in claim 2, wherein the groove has epoxy applied thereto, for fixing the optical fiber input/output parts, and the first, and second micro-mirror parts, thereto.

5 5. An optical switch as claimed in claim 2, wherein the first, and second micro-mirror parts are arranged to be at 45° to an optical path of the light from the optical fiber input part.

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10 6. An optical switch as claimed in claim 1, wherein each of the optical fiber input/output parts includes a silicon substrate, and a two dimensional array of a plurality of optical fibers fitted to the substrate, and each of the first, and second micro-mirror parts includes a silicon substrate, and a two dimensional array of a plurality of micro-mirrors fitted to the substrate.

15 7. An optical switch as claimed in claim 1, wherein the optical fiber input/output parts are fitted parallel to each other as one bundle, to face the first, and second micro-mirror parts at 45°.